

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of computing response time of a web server, comprising the steps of:

placing a plurality of correlation tags in data at networking and application layers, wherein said tags allow for later identification of said data;

collecting said data from said layers, wherein said data corresponds to a single event;

combining said data from said networking and application layers into a metric, wherein said data corresponding to a single web event is identified; and

calculating client perceived response time.

2. (Original) The method of claim 1, wherein said event is selected from one of a web page download and a web session.

3. (Original) The method of claim 1, wherein said calculating step is performed using analytical models of response time.

4. (Currently Amended) A method of estimating of a perceived response time of at least one web server computing device to one or more client computing devices connected to the at least one web server device via a network, the method comprising the steps of:

generating and placing a session identifier (ID) as a correlation tag in each of a plurality of requests sent by a client to a web server device, wherein said correlation tags identify said requests;

generating and placing a connection identifier (ID) as a correlation tag in each communication packet sent between the client and the web server device;

combining said plurality of requests and said communication packets into a metric, wherein said each request and communication packet corresponding to a single event is identified; and

estimating client perceived response time of said at least one web server computing device to a request by said one or more client computing devices connected to the web server device via a network.

5. (Original) The method of claim 4, wherein the network is the Internet.

6. (Original) The method of claim 4, wherein said step of generating and placing the session ID further comprises a step of establishing a web session between the client and the web server device.

7. (Original) The method of claim 4, further comprising a step of logging each web session between the client and the web server device.

8. (Currently Amended) The method of claim 4, wherein said step of generating and placing said [[a]] connection ID further comprises a step of establishing a network connection between the client and the web server device.

9. (Original) The method of claim 4, further comprising a step of logging said each communication packet sent between the client and the web server.

10. (Original) The method of claim 4, further comprising a step of grouping all of said plurality of requests and said communication packets corresponding to a single event.

11. (Original) The method of claim 4, wherein said estimating step further comprises the steps of

a) retrieving a page composition vector and TCP/IP round trip time (RTT), packet loss rate, and average connection time T_c ;

b) calculating time $T1 = T_c + C1(b1)$ and time $T2 = C1(o) + T_c + C2(b2)$ and setting a loop counter;

c) averaging $T1$ and $T2$ by $(T1+T2)/2$ and terminating processing if the loop counter is less than or equal to the value n ;

otherwise, if $T1$ is smaller than $T2$, $T1$ is set to $T1+(RTT/2) +C1(BI)$, and

if $T1$ is not smaller than $T2$, $T2$ is set to $T2+(RTT/2) +C2(BI)$; and

d) incrementing the loop counter and repeating step c,

wherein the page composition vector is composed of $\{b1, b2,...bn\}$ and o ,

b_i , where i is an number $1,2,...$, being the size of the i -th component of the web page,

n being the number of components,

o being the offset at which first component is embedded in a container page,

$C1(y)$ being the time it takes to download y bytes on a first TCP/IP connection between the client and the web server device, and

$C2(y)$ being the time it takes to download y bytes on a second TCP/IP connection between the client and web server device.

12. (Currently Amended) An apparatus for estimating a perceived client response time of at least one web server computing device to one or more client computing devices connected to the at least one web server via a network, the method comprising:

a means for generating and placing a session identifier (ID) as a correlation tag in each of a plurality of requests sent by the one or more client computing devices to the at least one web server, wherein said correlation tags identify said requests;

a means for generating and placing a connection identifier (ID) as a correlation tag in each communication packet sent between the one or more client computing devices and the at least one web server;

a means for combining said plurality of requests and said communication packets into a metric, wherein said each request and communication packet corresponding to a single event is identified; and

a means for estimating the perceived client response time of the at least one web server computing device to a request by the one or more client computing devices connected to the web server via the [[a]] network.

13. (Currently Amended) A computer program device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for an apparatus for estimating a perceived client response time of at least one web server computing device to one or more client computing devices connected to the at least one web server via a network, the method comprising:

a means for generating and placing a session identifier (ID) as a correlation tag in each of a plurality of requests sent by the one or more client computing devices to the at least one web server, wherein said correlation tags identify said requests;

a means for generating and placing a connection identifier (ID) as a correlation tag in each communication packet sent between the one or more client computing devices and the at least one web server;

a means for combining said plurality of requests and said communication packets into a metric, wherein said each request and communication packet corresponding to a single event is identified; and

a means for estimating the perceived client response time of the at least one web server computing device to a request by the one or more client computing devices connected to the web server via the [[a]] network.